IN THE CLAIMS

1. (currently amended) A method of ultrasound inspection, said method comprising:

providing a composite first aircraft engine part;

introducing ultrasound to the first aircrast engine part;

receiving <u>at least one reflection</u> reflections of the ultrasound introduced to the first <u>aircraft engine</u> part; and

predicting a residual strength of the first <u>aircraft engine</u> part using an amplitude of the received <u>reflection reflections</u>.

- 2. (currently amended) A method according to Claim 1 wherein predicting a residual strength comprises correlating an amplitude of at least one received reflection of at least one second <u>aircraft engine</u> part with at least one non-ultrasound test of the second <u>aircraft engine</u> part.
- 3. (currently amended) A method according to Claim 2 wherein predicting a residual strength comprises correlating the amplitude of the received <u>reflection</u> reflections of at least one second <u>aircraft engine</u> part with at least one destructive test of the second <u>aircraft engine</u> part.
- 4. (currently amended) A method according to Claim 3 wherein predicting a residual strength comprises correlating the amplitude of the received <u>reflection</u> reflections of at least one second <u>aircraft engine</u> part with a core sample test of the second <u>aircraft engine</u> part.
- 5. (currently amended) A method according to Claim 1 wherein predicting a residual strength comprises correlating an a plurality of amplitudes of a-received reflections of a plurality of second aircraft engine parts with at least one non-ultrasound test of each of the second aircraft engine parts.

- 6. (currently amended) A method according to Claim 5 wherein correlating <u>a plurality of amplitudes</u> comprises generating a linear least squares fit between the amplitudes and a plurality of results from the non-ultrasound tests.
- 7. (currently amended) A method according to Claim 1 wherein predicting a residual strength comprises predicting a residual shear strength of the first <u>aircraft engine</u> part using an amplitude of the received <u>reflection reflections</u>.
- 8. (currently amended) A method according to Claim 7 wherein predicting a residual shear strength comprises correlating an a plurality of amplitudes of a—received reflections of a plurality of second aircraft engine parts with at least one non-ultrasound shear strength test of each of the aircraft engine second parts.
- 9. (original) A method according to Claim 8 wherein correlating an amplitude comprises generating a linear least squares fit between the amplitudes and a plurality of results from the non-ultrasound shear strength tests.
 - 10. (currently amended) A ultrasound inspection system comprising:

a pulse echo transducer; and

a processor operationally coupled to said transducer, said processor configured to predict a residual strength of a first <u>aircraft engine</u> part using an amplitude of a received ultrasound reflection.

- 11. (currently amended) A system according to Claim 10 further comprising a memory containing a correlation of an amplitude of at least one received reflection of at least one second <u>aircraft engine</u> part with at least one non-ultrasound test of the second <u>aircraft engine</u> part, said processor further configured to predict a residual strength of the first <u>aircraft engine</u> part using an amplitude of a received ultrasound reflection and the correlation.
- 12. (currently amended) A system according to Claim 10 further comprising a memory containing a correlation of an amplitude of at least one received reflection of at

least one second <u>aircraft engine</u> part with at least one destructive test of the second <u>aircraft engine</u> part, said processor further configured to predict a residual strength of the first <u>aircraft engine</u> part using an amplitude of a received ultrasound reflection and the correlation.

- 13. (currently amended) A system according to Claim 10 further comprising a memory containing a correlation of an amplitude of at least one received reflection of at least one second <u>aircraft engine</u> part with a core sample test of the second <u>aircraft engine</u> part, said processor further configured to predict a residual strength of the first <u>aircraft engine</u> part using an amplitude of a received ultrasound <u>reflections</u> and the correlation.
- 14. (currently amended) A system according to Claim 10 further comprising a memory containing a correlation of an a plurality of amplitudes of received reflections of a plurality of second aircraft engine parts with at least one non-ultrasound test of each of the second aircraft engine parts, said processor further configured to predict a residual strength of the first aircraft engine part using an amplitude of a received ultrasound reflections and the correlation.
- 15. (currently amended) A system according to Claim 14 wherein said memory further contains a linear lest least squares fit between the amplitudes and a plurality of results from the non-ultrasound tests.
- 16. (currently amended) A system according to Claim 10 wherein said processor further configured to predict a residual shear strength of the first <u>aircraft engine</u> part.
- 17. (currently amended) A system according to Claim 16 further comprising a memory containing a correlation of an a plurality of amplitudes of a-received reflections of a plurality of second aircraft engine parts with at least one non-ultrasound test of each of the second aircraft engine parts, said processor further configured to predict a residual shear strength of the first aircraft engine part using an amplitude of a received ultrasound reflections reflection and the correlation.

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18. (currently amended) A system according to Claim 17 wherein said memory further contains a linear <u>lest least</u> squares fit between the amplitudes and a plurality of results from the non-ultrasound tests.

19. (currently amended) An ultrasound inspection device comprising:

means for non-destructively testing a first aircraft engine part; and

means for predicting a residual strength of the first <u>aircraft engine</u> part using a result from a non-destructive test of the first <u>aircraft engine</u> part with a plurality of destructive and non-destructive tests on second <u>aircraft engine</u> parts substantially similar to the first part.

20. (canceled)